

## Claims

What is claimed is:

1. A computer-implemented method for installing a computer program, the  
5 method comprising:

programmatically creating configuration information representing a hardware  
configuration of a first computer system, wherein the first computer system stores a  
computer program having one or more program references that depend on the hardware  
configuration; and

10 installing the computer program on a second computer system, wherein said  
installing comprises modifying a hardware configuration of the second computer system  
based on the programmatically created configuration information;

wherein said modifying the hardware configuration of the second computer  
system enables the computer program to utilize one or more hardware devices of the  
15 second computer system during execution of the computer program on the second  
computer system.

2. The method of claim 1, wherein said programmatically creating  
configuration information comprises:

20 programmatically analyzing the computer program to determine the one or more  
program references that depend on the hardware configuration;

programmatically determining a portion of the hardware configuration on which  
the program references depend; and

25 programmatically creating configuration information representing at least the  
portion of the hardware configuration on which the program references depend.

3. The method of claim 1,

wherein the one or more program references that depend on the hardware configuration comprise one or more program references to a hardware device of the first computer system.

5           4.       The method of claim 1,  
              wherein the one or more program references that depend on the hardware configuration comprise one or more of:

              a function call;  
              a method call;  
10           a graphical program node.

              5.       The method of claim 1, further comprising:  
              storing the programmatically created configuration information on a memory medium; and  
15           storing the computer program on the memory medium;  
              wherein said installing the computer program on the second computer system using the programmatically created configuration information comprises installing the computer program from the memory medium.

20           6.       The method of claim 5,  
              wherein said storing the programmatically created configuration information on the memory medium and said storing the computer program on the memory medium are performed in response to user input requesting creation of an installation program for the computer program.

25           7.       The method of claim 1, wherein the one or more program references that depend on the hardware configuration include one or more program references that depend on driver-level software, the method further comprising:  
              installing the driver-level software on the second computer system.

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8. The method of claim 1,  
wherein said modifying the hardware configuration of the second computer  
system comprises one or more of:

- 5        modifying a driver-level software setting;  
       modifying a virtual channel configuration;  
       modifying a scale configuration;  
       modifying a task configuration; and  
       modifying a tag configuration.

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9. The method of claim 1, further comprising:  
       detecting a conflict between the programmatically created configuration  
information and the hardware configuration of the second computer system; and  
       resolving the conflict.

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10. The method of claim 9,  
       wherein said resolving the conflict comprises automatically resolving the conflict  
without receiving user input.

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11. The method of claim 9, wherein said resolving the conflict comprises:  
       displaying information on a display indicating the conflict;  
       receiving user input specifying how to resolve the conflict;  
       resolving the conflict according to the user input.

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12. The method of claim 9,  
       wherein said resolving the conflict comprises automatically changing the  
computer program to avoid the conflict.

13. The method of claim 1, wherein the one or more program references that depend on the hardware configuration comprise one or more program references to a first hardware device of the first computer system, the method further comprising:

5 detecting a second hardware device of the second computer system that corresponds to the first hardware device of the first computer system;

wherein said modifying the hardware configuration of the second computer system comprises modifying the hardware configuration of the second computer system to enable the computer program to utilize the second hardware device during execution of the computer program on the second computer system.

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14. The method of claim 1,

wherein the programmatically created configuration information comprises extensible markup language (XML) information.

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15. The method of claim 1,

wherein the computer program is a graphical program.

16. The method of claim 15,

20 wherein the graphical program comprises a plurality of interconnected nodes that visually indicate functionality of the graphical program.

17. The method of claim 15,

wherein the graphical program comprises a data flow block diagram.

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18. The method of claim 1, further comprising:

programmatically analyzing the graphical program to determine the one or more program references that depend on the hardware configuration.

19. The method of claim 1,

wherein the computer program performs an instrumentation function;

wherein said modifying the hardware configuration of the second computer system enables the computer program to utilize one or more instruments coupled to the second computer system to correctly perform the instrumentation function.

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20. The method of claim 19,

wherein the instrumentation function performed by the computer program comprises one or more of:

a test and measurement function;

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an industrial automation function.

21. The method of claim 1,

wherein said modifying the hardware configuration of the second computer system comprises modifying one or more of the following types of hardware configuration information:

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DAQ hardware configuration information;

GPIB hardware configuration information;

VXI hardware configuration information.

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22. A computer-implemented method for installing a computer program, the method comprising:

storing a computer program on a first computer system, wherein the first computer system has a first hardware configuration, wherein the computer program comprises one or more program references that depend on the first hardware configuration;

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programmatically creating configuration information representing the first hardware configuration of the first computer system; and

installing the computer program on a second computer system, wherein the second computer system has a second hardware configuration, wherein said installing comprises modifying the second hardware configuration of the second computer system based on the programmatically created configuration information;

5 wherein said modifying the hardware configuration of the second computer system enables the computer program to utilize one or more hardware devices of the second computer system during execution of the computer program on the second computer system.

10 23. A computer-implemented method for installing a computer program, the method comprising:

storing a computer program on a first computer system, wherein the first computer system has a first hardware configuration, wherein the computer program  
15 comprises one or more program references that depend on the first hardware configuration;

programmatically creating configuration information representing the first hardware configuration of the first computer system;

associating the configuration information with the computer program;

20 wherein, during installation of the computer program on a second computer system, the configuration information is useable in modifying a hardware configuration of the second computer system to enable proper operation of the computer program on the second computer system.